

**AMENDMENTS TO THE DRAWINGS**

The attached sheet of drawings includes changes to Fig. 2. This sheet replaces the original sheet including Fig. 2. Fig. 2 has been amended to conform more clearly with its corresponding detailed description.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

**REMARKS**

Claims 1-15 are pending in the application.

Claims 1-5 stand rejected.

Claims 6-15 are withdrawn from consideration.

*Formal Matters*

Applicants have amended the specification to address certain informalities identified therein by Applicants. No new matter is added thereby..

*Restriction Requirement*

Claims 6-15 have been withdrawn from consideration as being directed to a non-elected invention. Applicants respectfully traverse the restriction requirement.

Applicants submit that the reason for the restriction requirement is not sufficiently clear. The Office Action states that “Claims 6-10 are directed towards an apparatus, while claims 11-15 are directed towards a computer program product. Each grouping would be classified in a class/subclass that is different than the method claims presented. Also, each apparatus and computer program need not be distinctly related to the method claims, e.g. process and apparatus claims.”

MPEP §817, which outlines a letter for a restriction requirement between distinct inventions, states that such a letter should give a short description of the total extent of the subject matter claimed in each group, pointing out critical claims of different scope....”

According to the MPEP §817, an indication of the classification of each group of claims should be made. Applicants respectfully note that the Office does point out critical claims of different scope or indicate how the groups of claims should be classified.

Further Applicants respectfully submit that claims 6-10 and 11-15 are drawn to the same invention as claims 1-5, and that a restriction requirement is improper. Therefore, Applicants respectfully request withdrawal of the restriction requirement.

### Drawings

The drawings are objected to under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims. Applicants respectfully traverse this objection.

The Office Action states that the following features of the claimed invention are not shown in the drawings: (1) estimating an expected component surplus, (2) the expected component surplus, (3) defining an uncancelable level for each of the components, (4) a quantity of each of the components, (5) computing the expected component surplus for the selected component using a mean production for the product, (6) the uncancelable level and the vector of connect rates, (7) defining a planned level, and (8) estimating a mean production. Applicants respectfully submit, as shown by the subsequent discussion, that each of the foregoing features of the claimed invention is shown in the drawings.

#### *(1) Estimating an Expected Component Surplus*

Fig. 2 shows a “Method 200 for the computation of surplus components (expected excess number of components remaining at the end of a period).” (specification, page 4, lines 22-24).

Fig. 2 includes step 210, which is preferably, but not necessarily, performed by a “Method and

Business Process for the Estimation of Mean Production for Assemble-To-Order Manufacturing Operations.” (specification, page 6, lines1-6). Fig. 2 can include a step (step 210) that produces estimated results; therefore, the computation of surplus components can be an estimation of expected component surplus. Thus, “estimating an expected component surplus” is clearly shown, and in fact, is the objective of the steps in Fig. 2 (note that step 216 includes “report[ing] expected excess amount for desired components to user”).

*(2) The expected component surplus*

Step 216 of Fig. 2 is the step of “report[ing] expected excess amount for desired components to user.” As noted in page 4, lines 22-24 of the specification, surplus components are the expected excess number of components remaining at the end of a period. Thus, step 216 of Fig. 2 clearly shows expected component surplus.

*(3) Defining an uncancelable level for each of the components*

Step 202 of Fig. 2 recites: “Obtain[ing] product and component data for all products in the planning folio.” Page 5, lines 14-16 state: “As part of step 202, the user enters (or otherwise inputs) a value di0 to represent the uncancelable portion of each component of interest. Thus, defining an uncancelable level for each of the components is clearly included in step 202.

*(4) A quantity of each of the components*

Amended claim 1 recites “defining an uncancelable level for each of the components, each of the uncancelable levels defining a *quantity of the each of the components* below which the quantity of the each of the components cannot be liquidated without incurring a charge.” (emphasis added). The specification, on page 2, lines 26-27 states: “The uncancelable level for a

component is the quantity of the component that cannot be liquidated without charge.” Thus, the quantity recited in claim 1 is the uncancelable level for a component. As previously demonstrated, the uncancelable level (or quantity) of each of the components is clearly included in step 202.

*(5) Computing the expected component surplus for the selected component using a mean production for the product*

As previously mentioned, Fig. 2 is directed toward computing expected component surplus. Step 210 of Fig. 2 states: “Evaluate expected surplus  $e_i$  by the applying the formula  $e_i = d_{i0} - a_i * q_{i0}$ . Page 6, line 9 of the specification states that  $q_{i0}$  is the expected mean production. The expected mean production for the product is computed in step 210 by using the component levels specified in steps 206 and 208. Additional detail about the estimation of mean production for a production is contained the concurrently filed application entitled “Method and Business Process for the Estimation of Mean Production for Assemble-To-Order Manufacturing Operations,” which is incorporated in the disclosure by reference.

*(6) The uncancelable level and the vector of connect rates*

Step 212 of Fig. 2 states: “Evaluate expected surplus  $e_i$  by the applying the formula  $e_i = d_{i0} - a_i * q_{i0}$ .” Page 6, lines 7-10 of the specification note that “in step 212 the formula  $e_i = d_{i0} - a_i * q_{i0}$  is used to compute the expected number of erodible components  $i$ . In this formula,  $d_{i0}$  is the uncancelable level for component  $i$ ,  $a_i$  is the vector of connect rates for component  $i$ , and  $q_{i0}$  is the expected mean production computed in step 210.” Thus, the uncancelable level and the vector of connect rates are clearly shown in step 212 as  $a_i$  and  $d_{i0}$ , respectively.

*(7) Defining a planned level*

Claim 2 of the claimed invention recites: “defining a planned level for the each of the components, each of the planned levels defining a quantity at which a corresponding one of the components is expected to be available.” Step 202 of Fig. 2 includes obtaining component allocations. (specification, page 5, line 5). Component allocations represent the maximum number of a component that is available. (specification, page 5, lines 11-15). Thus, step 202 of Fig.2 includes defining a planned level for each of the components, wherein each of the planned levels defines a quantity at which a corresponding one of the components is expected to be available.

*(8) Estimating a mean production*

As previously mentioned, step 210 includes estimating a mean production.

*Rejection of Claims under 35 U.S.C. §112*

Claims 1-5 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

The Office Action states that “amended claims 1-5 do not have support in the descriptive portion of the specification, e.g. pages 5-7, that support the claim language. Also, the claim language is not supported in juxtaposition to the drawing figures presented.”

MPEP 706.03(c) states that an Office Action that based on the 35 U.S.C. §112 description requirement should “identify (by suitable reference to page and line numbers and/or drawing figures) the subject matter not properly described in the application as filed, and provide

an explanation of your position.” Applicants respectfully submit that the Office Action does not identify any particular subject matter claimed in claims 1-5 that does not have support in the descriptive portion of the specification. The Office Action makes the broad statement that “amended claims 1-5 do not have support in the descriptive portion of the specification, e.g., pages 5-7, that support the claim language.”

Applicants are unaware of any requirement that would limit the written description of the invention to pages 5-7 of the disclosure. As clearly stated in 37 CFR 1.77(b): “The specification should include the following sections in order: (1) Title of the invention...(2) Cross-reference to related applications... (3) Statement regarding federally sponsored research or development. (4) Reference to a ‘Sequence Listing,’... (5) Background of the invention. (6) Brief summary of the invention. (7) Brief description of the several views of the drawing. (8) Detailed description of the invention. (9) A claim or claims. (10) Abstract of the disclosure.” Thus, Applicants may rely on other portions of the specification to demonstrate that the claims are in compliance with 35 U.S.C. §112.

Applicants respectfully submit that every feature of the claimed invention finds support in the specification. The features of the claim 1 find support in the specification in at least the following locations: Estimating an expected component surplus: see page 4, lines 22-24; Identifying a plurality of components required to produce a product: see page 5, line 3; Defining a vector of connect rates for the components: see page 6, lines 1-10; Defining an uncancelable level for each of the components: see pages 4 and 5; Assuming that a selected one of the components is available at least at an uncancelable level of the uncancelable levels corresponding to the selected one of the components: see page 2 line 22 to page 3 line 7;

Computing the expected component surplus for the selected component using a mean production for the product, the uncancelable level and the vector connect rates: See page 6, lines 1-10.

The features of the claim 2 find support in the specification on page 2, lines 21-28. The features of the claim 3 find support in the specification on page 2, lines 22 to page 3, line 10. The features of claim 4 find support in the specification on page on page 2, line 22 to page 3, line 10. The features of claim 5 find support in the specification on page 6, lines 1-10.

With regard to the claim language not being supported “in juxtaposition to the drawing figures presented,” Applicants refer to the previous discussion of the drawings, which demonstrates that the claim language is supported by the drawings.

Accordingly, Applicants respectfully request withdrawal of the rejection based on 35 U.S.C. §112.

*Rejection of Claims under 35 U.S.C. §103*

Claims 1-5 stand rejected under 35 U.S.C. §103(a) as being anticipated by Dietrich et al., U.S. Patent No. 5,630,070. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the claimed invention is not made obvious by Dietrich, either taken alone or in permissible combination with other references or skill in the art at the time of invention. As an initial matter, Applicants respectfully submit that the rejection lacks the requisite clarity. The Court of Appeals for the Federal Circuit has set forth requirement for rejections based on 35 U.S.C §103, which Applicants respectfully submit have not been met in at least the rejection of independent claim 1. “To reject claims in an application under section 103, an examiner must show an un rebutted prima facie case of obviousness. In the absence of a



proper prima facie case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent.” *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir 1998) (citations omitted). Applicants respectfully submit that the rejection fails to meet the requirements set forth, as the rejection is not clear as to the elements of Dietrich that correspond to the claimed elements. In fact, no specific citation whatsoever of section of or elements disclosed in Dietrich, on which claim 1 might read, are provided. Applicant therefore respectfully requests clarification of the rejection as to the correspondence between the elements of Dietrich and those of the claimed invention, as claimed in claim 1, be demonstrated. Nevertheless, Applicants have made every attempt to respond to the rejections recited in the Office Action.

As to the rejection of claim 1, Dietrich fails to teach a variety of elements of the claimed invention. The Office Action notes that Dietrich fails to disclose an uncancelable level for each component of the product. This means that Dietrich fails to disclose “defining an uncancelable level for each of the components, each of the uncancelable levels defining a quantity of the each of the components below which the quantity of the each of the components cannot be liquidated without incurring a charge.” Failing to disclose an uncancelable level also means that Dietrich fails to disclose “assuming that a selected one of the components is available at least at an uncancelable level of the uncancelable levels corresponding to the selected one of the components” and “computing the expected component surplus for the selected component using a mean production for the product, the uncancelable level and the vector of connect rates.”

Furthermore, Applicants are unable to find taught, suggested or shown in Dietrich a vector of connect rates for the components. The vector of connect rates for a component is used in the present invention to compute the expected number of erodible components. (specification,

page 6, lines 7-8). In contrast, Dietrich focuses on determining the optimum number of end components in accordance with a linear programming optimization algorithm. Thus, Dietrich is not concerned with finding an expected number of erodible components and could not be expected to suggest the use of vector connect rates and uncancelable levels in the computation of an expected number of erodible components.

With respect to uncancelable levels being “well known” for use in estimating an expected component surplus, Applicants respectfully request that the Examiner provide an affidavit as to the personal knowledge relied on within the meaning of MPEP §2144.03 and 37 C.F.R. §1.107, or designate a reference or particular parts of the cited references and the pertinence of each reference in support of the rejection as required by 37 C.F.R. 1.106(b), which provides: “When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.”

In conclusion, it is unclear which, if any, of the limitations of claim 1 are taught by Dietrich. Furthermore, the deficiencies of Dietrich can not be remedied by looking to the ordinary skill in the art because the elements of the claimed invention that Dietrich fails to disclose are not well known in the art. Applicants also submit that even if the elements not disclosed by Dietrich were well known in the art, “implementing common knowledge information in a product production system” is not adequate motivation to combine Dietrich with the relevant skill in the art. Thus, the Office Action fails to establish a prima facie case of obviousness.

Applicant therefore respectfully submits that claim 1 clearly distinguishes over Dietrich, taken alone or in permissible combination with the knowledge of one having ordinary skill in the art. Applicant submits that these arguments apply with equal force to independent claims 6 and 11. Applicant therefore respectfully submits that independent claims 1, 6 and 11, as well as claims 2-5, 7-10 and 12-15 which depend on claims 1, 6 and 11, are also allowable for at least the foregoing reasons. Applicant therefore respectfully requests withdrawal of the rejections based upon 35 U.S.C. §103(a). Accordingly, Applicant respectfully submits that claims 1-15 are in condition for allowance.

CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5084.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 29, 2004.

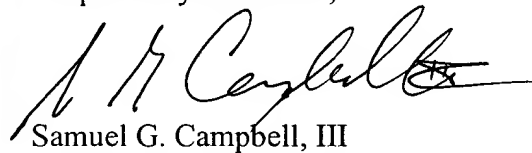


Attorney for Applicants

12/29/04

Date of Signature

Respectfully submitted,



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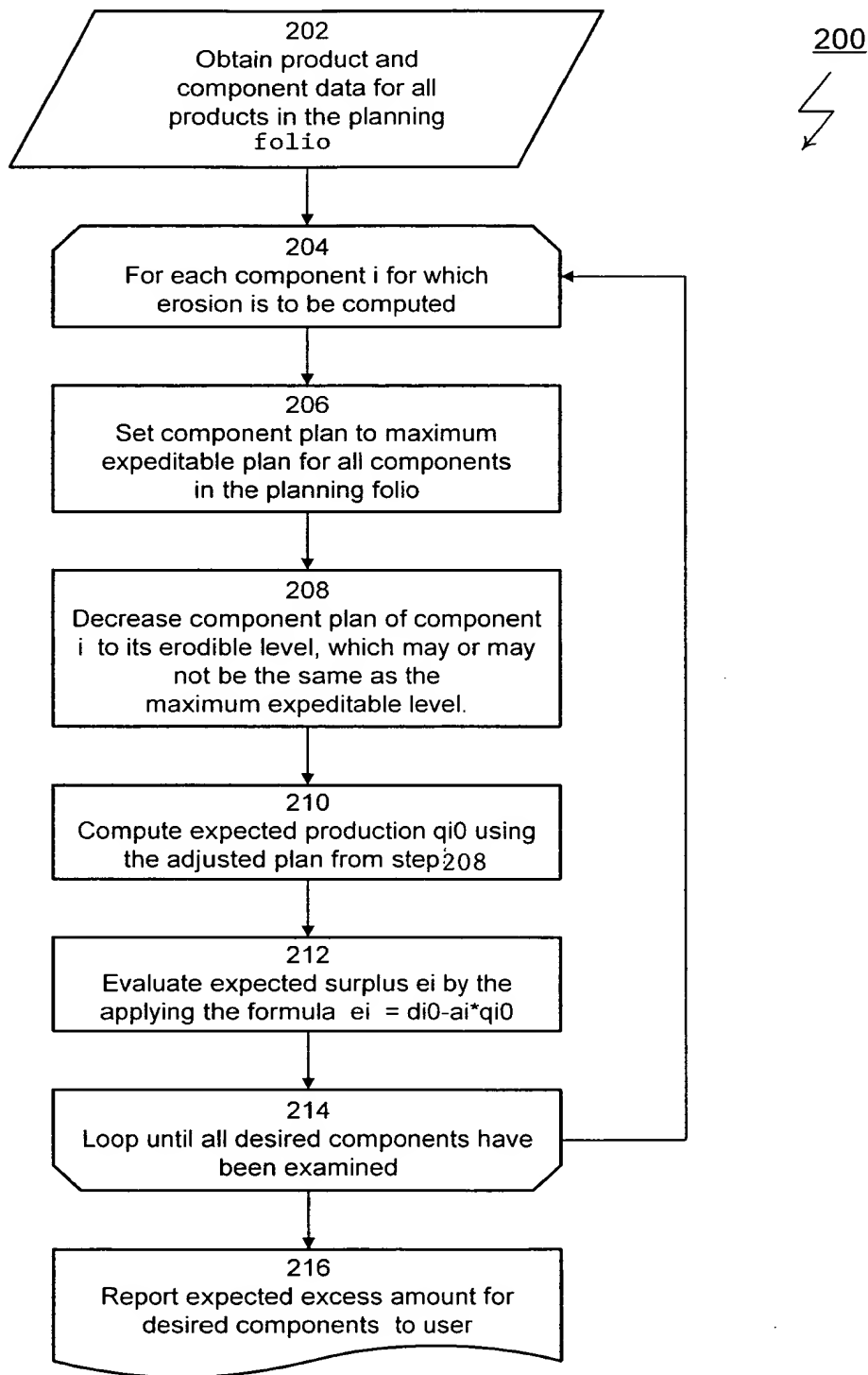
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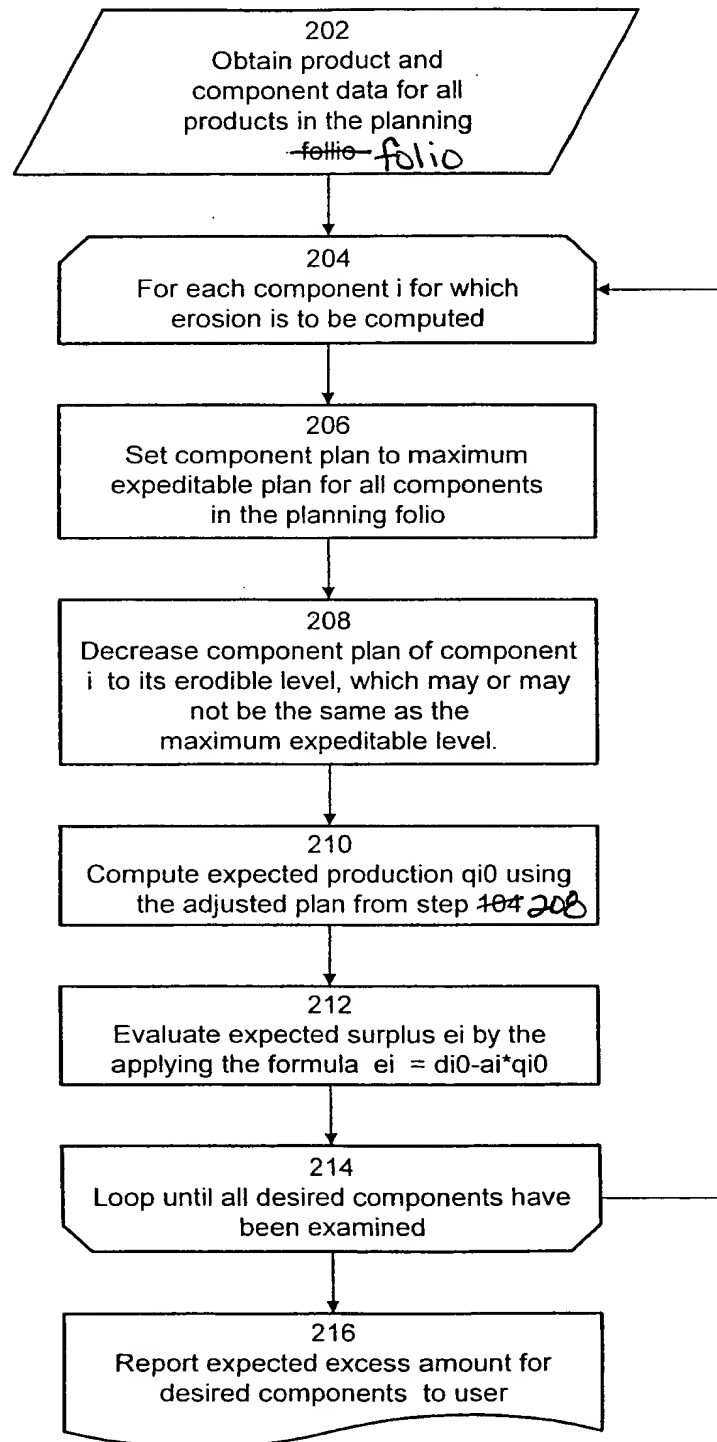
Fig. 2





ANNOTATED SHEET SHOWING CHANGES

Fig. 2



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